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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,406	02/12/2001	S. Brandon Keller	10007975-1	1870

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EXAMINER

DAY, HERNG DER

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,406

Applicant(s)

KELLER ET AL.

Examiner

Herng-der Day

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/16/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to Applicants' Amendment and Response ("Amendment") to Office Action dated August 26, 2004, mailed November 8, 2004.

1-1. Claims 1, 10, and 15 have been amended. Claims 1-20 are pending.

1-2. Claims 1-20 have been examined and rejected.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3-1. All independent claims 1, 10, and 15 recite the limitation "the solutions database includes a list containing one or more violations and one or more solutions corresponding to the one or more violations contained in the list" in each claim. The corresponding relationship is unclear between the violations and solutions. In other words, it is unclear whether one solution corresponding to one violation or more violations. It is also unclear whether more solutions are corresponding to one violation. For the purpose of claim examination, the Examiner will interpret the corresponding relationship as "one solution corresponding to one violation".

3-2. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiba, JP 9-128424, published May 16, 1997 (IDS 1L, filed August 16, 2004), in view of Moerkotte et al., "Reactive Consistency Control in Deductive Databases", ACM Transactions on Database Systems, Volume 16, Number 4, 1991, pages 670-702 and renumbered as pages 1-29.

5-1. Regarding claim 1, Toshiba discloses a method for analyzing a circuit design comprising: reading violations (Toshiba, indicates that it is an error, paragraph [0028]) of a specification for a circuit design (Toshiba, constitute a design circuit, paragraph [0017]);

Toshiba fails to expressly disclose identifying symptoms and identifying solutions to the violations based on the symptoms.

Moerkotte et al. outline the architecture of a system for checking and repairing inconsistencies to support the user in the situation where s/he executed a transaction which violated one or more consistency constraints because one cannot assume that the user truly understands the interplay of all, facts, rules, and consistency constraints. The goal is to automatically generate repairs in order to regain consistency (Moerkotte, page 2, paragraph 5) Specifically, Moerkotte et al. disclose,

identifying symptoms of the violations based on the circuit design (Moerkotte, page 12, to extract potential symptoms from the trace, section 4, paragraph 1);

identifying solutions to the violations based on the symptoms using data in a solutions database, wherein the solutions database includes a list containing one or more violations and one or more solutions corresponding to the one or more violations contained in the list (Moerkotte, page 19, constructing definite causes from potential ones, and translating causes into repairs, section 6, paragraph 1); and

proposing a proposed solution based on data stored in the solutions database (Moerkotte, page 24, analyzer window, section 7.3, paragraph 1).

It would have been obvious to one of ordinary skills in the art at the time the invention was made to modify the teachings of Toshiba to incorporate the teachings of Moerkotte et al. to obtain the invention as specified in claim 1 because Moerkotte's system would help circuit designer to complete a consistent circuit design by automatically generating repairs in order to regain consistency if a violation of a specification has been identified.

5-2. Regarding claim 2, Moerkotte et al. further disclose comprising:

running an E-CAD tool on the circuit design (Moerkotte, page 8, section 3.1 The Consistency Check); and

detecting violations of the specification using the E-CAD tool (Moerkotte, Once a constraint has been invalidated, page 8, section 3).

5-3. Regarding claim 3, Moerkotte et al. further disclose comprising storing the violations to a violations file, and wherein the step of reading violations comprises reading the violations file (Moerkotte, page 10, section 3.2 The Trace).

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5-4. Regarding claim 4, Moerkotte et al. further disclose comprising configuring the E-CAD tool to the circuit design using a configuration file (Moerkotte, page 25, data management component, section 8, paragraph 2).

5-5. Regarding claim 5, Moerkotte et al. further disclose comprising:

receiving a selected solution (Moerkotte, selects one of the repair actions, page 3, paragraph 1, lines 2-3);

re-configuring an E-CAD tool based on the selected solution (Moerkotte, performs it, page 3, paragraph 1, line 3); and

re-running the E-CAD tool on the circuit design (Moerkotte, restarts the consistency check, page 3, paragraph 1, lines 3-4).

5-6. Regarding claim 6, Moerkotte et al. further disclose the step of proposing the proposed solution comprises displaying at least one proposed solution on a display device (Moerkotte, page 24, analyzer window, section 7.3, paragraph 1), and wherein the step of receiving the selected solution comprises receiving an input signal from an input device (Moerkotte, page 24, select the potential causes, section 7.3, paragraph 3).

5-7. Regarding claim 7, Toshiba further discloses the step of re-configuring comprises editing a configuration file of the E-CAD tool (Toshiba, rewrites a parameter error rule, paragraph [0018]).

5-8. Regarding claim 8, Moerkotte et al. further disclose comprising storing data related to symptoms and solutions for the circuit configuration in the solutions database (Moerkotte, page 25, The prototype was implemented as a main memory database system, section 8, paragraph 1).

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5-9. Regarding claim 9, Moerkotte et al. further disclose the steps of reading violations, identifying symptoms, identifying solutions, and proposing the proposed solution comprise using a software configuration tool stored in a computer memory (Moerkotte, page 25, The prototype was implemented as a main memory database system, section 8, paragraph 1).

5-10. Regarding claim 10, the computer system claim includes equivalent method limitations as in claim 1 and is unpatentable using the same analysis of claim 1.

5-11. Regarding claim 11, Moerkotte et al. further disclose comprising instructions for:

configuring an E-CAD tool to the circuit design using a configuration file (Moerkotte, page 25, data management component, section 8, paragraph 2);

running the E-CAD tool on the circuit design (Moerkotte, page 8, section 3.1 The Consistency Check);

detecting violations of the specification using the E-CAD tool (Moerkotte, Once a constraint has been invalidated, page 8, section 3); and

storing the violations to a violations file; and wherein the step of reading violations comprises reading the violations file (Moerkotte, page 10, section 3.2 The Trace).

5-12. Regarding claim 12, Moerkotte et al. further disclose comprising instructions for:

receiving a selected solution (Moerkotte, selects one of the repair actions, page 3, paragraph 1, lines 2-3);

re-configuring an E-CAD tool based on the selected solution (Moerkotte, performs it, page 3, paragraph 1, line 3); and

re-running the E-CAD tool on the circuit design (Moerkotte, restarts the consistency check, page 3, paragraph 1, lines 3-4).

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5-13. Regarding claim 13, Moerkotte et al. and Toshiba further disclose comprising instructions for:

receiving a selected solution (Moerkotte, selects one of the repair actions, page 3, paragraph 1, lines 2-3); and

editing a configuration file of an E-CAD tool based on the selected solution (Toshiba, rewrites a parameter error rule, paragraph [0018]).

5-14. Regarding claim 14, Moerkotte et al. further disclose the step of proposing the proposed solution comprises displaying at least one proposed solution on a display device (Moerkotte, page 24, analyzer window, section 7.3, paragraph 1), and wherein the step of receiving a selected solution comprises receiving an input signal from an input device (Moerkotte, page 24, select the potential causes, section 7.3, paragraph 3).

5-15. Regarding claim 15, the computer-readable medium claim includes equivalent method limitations as in claim 1 and is unpatentable using the same analysis of claim 1.

5-16. Regarding claims 16-19, these computer-readable medium claims include equivalent limitations as in claims 11-14 and are unpatentable using the same analysis of claims 11-14.

5-17. Regarding claim 20, Moerkotte et al. further disclose comprising re-running the E- CAD tool on the circuit design (Moerkotte, restarts the consistency check, page 3, paragraph 1, lines 3-4).

Applicants' Arguments

6. Applicants argue the following:

(1) “neither Lin nor Hekmatpour, applied separately or in combination, expressly or inherently discloses or suggests each and every element of the claimed invention” (page 5, paragraph 5, Amendment).

Response to Arguments

7. Applicants’ arguments have been fully considered.

7-1. Applicants’ argument (1) is moot in view of the new ground(s) of rejection. The rejections of claims 1-20 under 35 U.S.C. 102(e)/103(a) in the Office Action dated August 26, 2004, have been withdrawn.

Conclusion

8. Applicants’ amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30. Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jean R. Homere can be reached on (571) 272-3780. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day H.D.
April 18, 2005

Thai Phan
Thai Phan
Patent Examiner
AU: 2128